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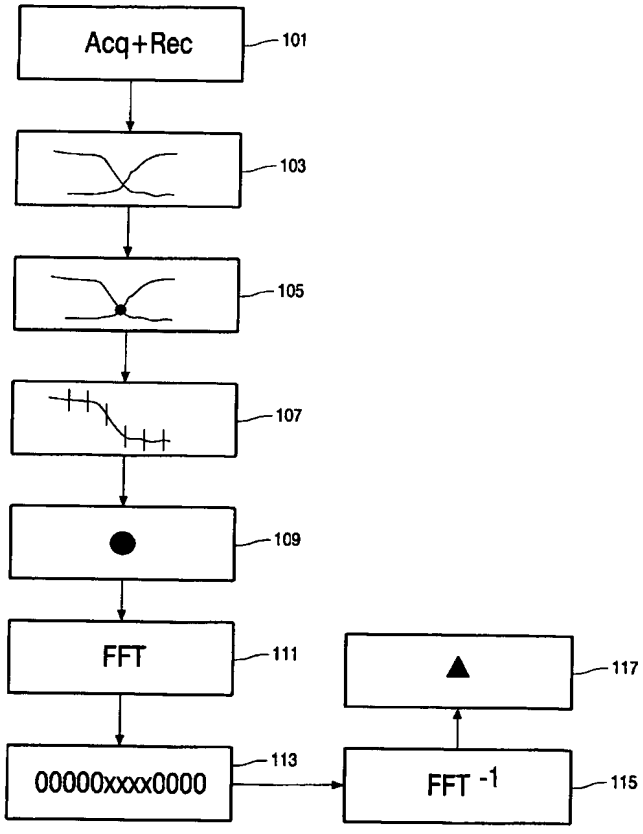
[Continued on next page]

(54) Title: METHOD OF DEFINING A SURFACE OR A VOLUME BY FOURIER INTERPOLATION



(57) Abstract: The invention relates to a method of defining a surface or a volume in a three-dimensional, and in particular medical, data set. At least two starting lines (11, 13), which preferably lie in mutually perpendicular planes and intersect one another, having been preset, contour lines (31) that lie between the starting lines (11, 13) are determined by Fourier transformation. These contour lines (31) form a surface structure (63) from which a surface can be determined by polygonization, e.g. by triangulation. If the starting lines are closed, the surface too is closed and defines a volume.

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A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 G06T

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal, WPI Data, COMPENDEX, INSPEC, BIOSIS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2001/033283 A1 (MOELLER THOMAS ET AL) 25 October 2001 (2001-10-25) cited in the application paragraphs '0044!-'0053!,'0081!-'0105!; claims 1-31; figures 1-5,8-10,12,13 ---	1-9
A	RICK LYONS: "How to interpolate in the Time-Domain by Zero-Padding in the Frequency Domain" INTERPOLATE IN THE TIME-...PADDING IN THE FREQUENCY DOMAIN, 'Online! 13 January 2001 (2001-01-13), XP002281208 Retrieved from the Internet: <URL:http://www.dspguru.com/howto/tech/zeropad.htm> 'retrieved on 2004-05-21! the whole document --- -/--	1-9

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in annex.

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European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31–70) 340–2040, Tx. 31 651 epo nl, Fax: (+31–70) 340–3016	Kulak, E

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	M. H. KUO; M.C. CHEN: "Biomedical Data Interpolation for 3D Visual Models" 6TH INTERNATIONAL CONFERENCE ON COMPUTER GRAPHICS AND VISUALIZATION, vol. 2, 1998, pages 208-214, XP008030864 page 206, left hand column, the paragraph starting with "The one-dimensional.."	1-9

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2001033283 A1	25-10-2001	NONE	